Complete Summary

TITLE

Adult diabetes: percentage of patients with most recent LDL-C less than 130 mg/dL.

SOURCE(S)

National Diabetes Quality Improvement Alliance performance measurement set for adult diabetes. Chicago (IL): National Diabetes Quality Improvement Alliance; 2003 May 1. 11 p.

Brief Abstract

DESCRIPTION

This measure assesses the percentage of adult diabetes patients aged 18-75 years with most recent low-density lipoprotein-cholesterol (LDL-C) less than 130 mg/dL.

This measure is used for the purpose of public reporting. The measure is currently in use for public reporting through the National Committee on Quality Assurance (NCQA) HEDIS® Program.

RATIONALE

Persons with diabetes are at increased risk for coronary heart disease (CHD). Lowering serum cholesterol levels can reduce the risk for CHD events.

American Association of Clinical Endocrinologists/American College of Endocrinology (AACE/ACE) recommend that a fasting lipid profile be obtained during an initial assessment, each follow-up assessment, and annually as part of the cardiac-cerebrovascular-peripheral vascular module.

American Diabetes Association (ADA) recommends that a fasting lipid profile be obtained as part of an initial assessment. Adult patients with diabetes should be tested annually for lipid disorders with fasting serum cholesterol, triglycerides, high-density lipoprotein (HDL) cholesterol, and calculated low-density lipoprotein (LDL) cholesterol measurements. If values fall in lower-risk levels, assessments may be repeated every two years.

Clearly, the clinical recommendations and treatment goals for persons with diabetes define as the target LDL-C level less than 100 mg/dL. The Alliance public reporting measure remains at less than 130 mg/dL for two reasons:

1. Many valid clinical reasons may exist why an individual patient does not achieve an LDL-C level lower than 100 mg/dL. Therefore, it is not appropriate to hold a large group (e.g., a health plan) accountable for a population reaching an LDL-C lower than 100 mg/dL. The quality improvement (QI) measures enable a provider to track an individual patient's progress toward the target goals.
2. For population-based measurement, it is desirable to have a distribution of results so that populations can be distinguished. Based on National Committee for Quality Assurance (NCQA) Health Plan Employer Data and Information Set (HEDIS®) 2001 data, at least 50% of health plans currently do not meet a population level of LDL-C less than 130 mg/dL. Therefore, room for improvement remains at this level.

PRIMARY CLINICAL COMPONENT

Diabetes mellitus; low-density lipoprotein-cholesterol (LDL-C)

DENOMINATOR DESCRIPTION

All patients diagnosed with diabetes aged 18-75 years

NUMERATOR DESCRIPTION

The number of patients from the denominator with most recent low-density lipoprotein-cholesterol (LDL-C) less than 130 mg/dL

Evidence Supporting the Measure

PRIMARY MEASURE DOMAIN

Outcome

SECONDARY MEASURE DOMAIN

Not applicable

EVIDENCE SUPPORTING THE MEASURE

A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
A formal consensus procedure involving experts in relevant clinical, methodological, and organizational sciences
One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

NATIONAL GUIDELINE CLEARINGHOUSE LINK

- The American Association of Clinical Endocrinologists medical guidelines for the management of diabetes mellitus: the AACE system of intensive diabetes self-management--2002 update.

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Wide variation in quality for the performance measured

EVIDENCE SUPPORTING NEED FOR THE MEASURE

American Association of Clinical Endocrinologists, American College of Endocrinology. Medical guidelines for the management of diabetes mellitus: the AACE system of intensive diabetes self-management--2002 update. Endocr Pract 2002 Jan-Feb;8(Suppl 1):40-82. [96 references]

American Association of Clinical Endocrinologists. AACE medical guidelines for clinical practice for the diagnosis and treatment of dyslipidemia and prevention of atherogenesis. Endocr Pract 2000 Mar-Apr;6(2):162-213. [351 references]

Management of dyslipidemia in adults with diabetes. Diabetes Care 2002 Jan;25(Suppl 1):S74-S77. [12 references]

Standards of medical care for patients with diabetes mellitus. Diabetes Care 2002 Jan;25(Suppl 1):S33-49. [91 references]

State of Use of the Measure

STATE OF USE

Current routine use

CURRENT USE

Internal quality improvement
National health care quality reporting

Application of Measure in its Current Use

CARE SETTING

Ambulatory Care
Community Health Care
Managed Care Plans
Physician Group Practices/Clinics
Rural Health Care

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Advanced Practice Nurses
Physician Assistants
Physicians

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Individual Clinicians

TARGET POPULATION AGE

Age 18-75 years

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

- Total: 18.2 million people - 6.3% of the population - have diabetes
- Diagnosed: 13 million people
- Undiagnosed: 5.2 million people
- New cases diagnosed per year: 1.3 million
- About one third of these individuals do not know that they have the disease.

EVIDENCE FOR INCIDENCE/PREVALENCE

American Diabetes Association. Diabetes statistics. [internet]. Alexandria (VA): American Diabetes Association; [cited 2004 Jun 11]. [2 p].

National diabetes fact sheet: national estimates on diabetes. [internet]. Atlanta (GA): Centers for Disease Control and Prevention (CDC), National Center for Chronic Disease Prevention and Health Promotion; 2003 [updated 2003 Dec 04]; [cited 2004 Feb 01]. [8 p].

ASSOCIATION WITH VULNERABLE POPULATIONS

Unspecified

BURDEN OF ILLNESS

- Diabetes is the leading cause of end-stage renal disease, accounting for 43% of new cases. Adults with diabetes account for more than 60% of nontraumatic lower limb amputations and are also twice as likely to have heart disease than people without diabetes.
- Diabetes is the sixth leading cause of death listed on U.S. death certificates in 2000. This is based on the 69,301 death certificates in which diabetes was listed as the underlying cause of death. Altogether, diabetes contributed to 213,062 deaths.

- Complications from diabetes include hearth disease, stroke, hypertension, retinopathy, end-stage renal disease, peripheral neuropathy, non-traumatic lower limb amputations, periodontal disease, pregnancy complications affecting mother and fetus, ketoacidosis, and coma.
- Persons with diabetes are at increased risk for coronary heart disease (CHD). Lowering serum cholesterol levels can reduce the risk for CHD events.

EVIDENCE FOR BURDEN OF ILLNESS

American Association of Clinical Endocrinologists, American College of Endocrinology. Medical guidelines for the management of diabetes mellitus: the AACE system of intensive diabetes self-management--2002 update. Endocr Pract 2002 Jan-Feb;8(Suppl 1):40-82. [96 references]

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Standards of medical care for patients with diabetes mellitus. Diabetes Care 2002 Jan;25(Suppl 1):S33-49. [91 references]

UTILIZATION

Unspecified

COSTS

- 2002 cost of diabetes in the United States: $132 billion
- Direct medical costs: $92 billion
- Indirect costs: $40 billion (disability, work loss, premature mortality)

EVIDENCE FOR COSTS

American Diabetes Association. Diabetes statistics. [internet]. Alexandria (VA): American Diabetes Association; [cited 2004 Jun 11]. [2 p].

National diabetes fact sheet: national estimates on diabetes. [internet]. Atlanta (GA): Centers for Disease Control and Prevention (CDC), National Center for Chronic Disease Prevention and Health Promotion; 2003 [updated 2003 Dec 04]; [cited 2004 Feb 01]. [8 p].

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness

Data Collection for the Measure

CASE FINDING

Users of care only

DESCRIPTION OF CASE FINDING

All patients diagnosed with diabetes aged 18-75 years

DENOMINATOR SAMPLING FRAME

Patients associated with provider

DENOMINATOR (INDEX) EVENT

Clinical Condition

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions
All patients diagnosed with diabetes aged 18-75 years

Exclusions
None

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions
The number of patients from the denominator with most recent low-density lipoprotein-cholesterol (LDL-C) less than 130 mg/dL

Exclusions
None

DENOMINATOR TIME WINDOW

Time window follows index event

NUMERATOR TIME WINDOW

Encounter or point in time

DATA SOURCE

Administrative data
Laboratory data
Medical record

LEVEL OF DETERMINATION OF QUALITY

Individual Case

OUTCOME TYPE

Clinical Outcome

PRE-EXISTING INSTRUMENT USED

None

Computation of the Measure

SCORING

Rate

INTERPRETATION OF SCORE

Better quality is associated with a higher score

ALLOWANCE FOR PATIENT FACTORS

Unspecified

STANDARD OF COMPARISON

Internal time comparison

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

Unspecified

Identifying Information

ORIGINAL TITLE

Percentage of patients with most recent LDL-C less than 130.

MEASURE COLLECTION

National Diabetes Quality Improvement Alliance Performance Measures

MEASURE SET NAME

National Diabetes Quality Improvement Alliance Performance Measurement Set for Adult Diabetes

DEVELOPER

National Diabetes Quality Improvement Alliance

INCLUDED IN

National Healthcare Quality Report (NHQR)

ADAPTATION

Measure was not adapted from another source.

RELEASE DATE

2003 May

MEASURE STATUS

This is the current release of the measure.

SOURCE(S)

National Diabetes Quality Improvement Alliance performance measurement set for adult diabetes. Chicago (IL): National Diabetes Quality Improvement Alliance; 2003 May 1. 11 p.

MEASURE AVAILABILITY

The individual measure, "Percentage of Patients with Most Recent LDL-C Less Than 130," is published in the "National Diabetes Quality Improvement Alliance Performance Measurement Set for Adult Diabetes." This document is available in Portable Document Format (PDF) from the National Diabetes Quality Improvement Alliance Web site.

NQMC STATUS

This NQMC summary was completed by ECRI on December 9, 2003. The information was verified by the measure developer on August 19, 2004.

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